

The HIV/AIDS Epidemic among Communities of Color in Massachusetts – Detailed Data Tables and Technical Notes:

Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed while residing in another state before being reported in Massachusetts. As of January 1, 2011, this resulted in the removal of 2,297 HIV/AIDS cases, of which 739 have died and 1,558 were living. These persons living with HIV/AIDS may currently reside and receive care in the Commonwealth. The total number of persons living in Massachusetts with HIV/AIDS, irrespective of location of diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS surveillance system. The cases are assigned to the state that reports the earliest date of AIDS diagnosis, if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that all previous HIV/AIDS fact sheets, data reports and presentations include cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the Massachusetts Department of Public Health (MDPH) HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual exposure mode category for males; those cases have been reassigned to the no identified risk (NIR) exposure mode category. The presumed heterosexual exposure mode category was used with the intention of identifying HIV exposure mode for females when sex with males is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of females living with HIV/AIDS and 41% of recent HIV diagnoses among females are reported in the presumed heterosexual exposure mode category. The application of the presumed heterosexual exposure mode category to males is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate exposure modes that are possible for males, including sex with other men (MSM) or IDU. The CDC reports males diagnosed with HIV/AIDS who report sex with females as their only risk factor, without corresponding partner risk or HIV status information, in the NIR exposure mode category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for males in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual exposure mode categories for females.

Table 1. Total number of people reported with HIV infection or AIDS¹ by mortality status on December 31, 2010: Massachusetts²		
	N	%
People Living with HIV/AIDS	17,621	59%
People Reported with HIV or AIDS Who Are Deceased	12,356	41%
Total Number of People Reported with HIV Infection or AIDS	29,977	100%
¹ Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on January 1, 1999 ² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/11		

Table 2. People living with HIV/AIDS on December 31, 2010 by gender, race/ethnicity, place of birth and health service region: Massachusetts¹

People Living with HIV/AIDS on 12/31/10		
Gender:	N	%
Male	12,549	71%
Female	5,072	29%
Race/Ethnicity:	N	%
White (non-Hispanic)	7,810	44%
Black (non-Hispanic)	5,141	29%
Hispanic/Latino	4,341	25%
Asian/Pacific Islander	248	1%
Other/Unknown	81	<1%
Place of Birth:	N	%
US	11,768	67%
Puerto Rico/US Dependency ²	1,991	11%
Non-US	3,862	22%
Health Service Region³:	N	%
Boston HSR	5,625	32%
Central HSR	1,535	9%
Metro West HSR	2,455	14%
Northeast HSR	2,671	15%
Southeast HSR	2,412	14%
Western HSR	1,978	11%
Prison ⁴	941	5%
Total⁵	17,621	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Ninety-six percent of people living with HIV/AIDS who were born in a US Dependency were born in Puerto Rico, <1% were born in the US Virgin Islands, and 3% were born in an unknown dependency.

³ Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf for configuration of health service regions.

⁴ HSRs are regions defined geographically to facilitate targeted health service planning. While prisons are not an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

⁵ Total includes 4 people living with HIV/AIDS with unknown HSR.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 3. People living with HIV/AIDS on December 31, 2010 by exposure mode: Massachusetts¹

People Living with HIV/AIDS on 12/31/10		
Exposure Mode:	N	%
Male-to-male sex (MSM)	6,252	35%
Injection drug use (IDU)	3,920	22%
MSM/IDU	575	3%
Receipt of blood/blood products/other	87	<1%
Pediatric	325	2%
Total heterosexual sex (HTSX)	2,477	14%
• HTSX w/ an injection drug user	900	5%
• HTSX w/ bisexual male (females only)	43	<1%
• HTSX w/ a person w/ HIV or AIDS	31	<1%
• Other HTSX ²	1,503	9%
Total undetermined/other	3,985	23%
• Presumed heterosexual sex ³	1,490	8%
• Undetermined/other ⁴	2,495	14%
Total	17,621	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Includes heterosexual sex with a person who received blood/blood products.

³ Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁴ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Note: The category of “presumed heterosexual” is used in Massachusetts to re-assign females who are reported with an exposure of heterosexual sex, but only with a partner of unknown HIV status or behavioral risk. Massachusetts uses the category of presumed heterosexual to distinguish these female cases from other undetermined cases about which we know less. Prior to January 1, 2011, the presumed heterosexual category was also used to report HIV data in males. The rationale for the application of the presumed heterosexual exposure mode category to females only has been addressed in the MDPH OHA report “Intersecting Risks: HIV Infection among Heterosexual Women and Men in Massachusetts.” (2010)

http://www.mass.gov/Eeohhs2/docs/dph/aids/intersecting_risks.pdf . Nationally, the Centers for Disease Control and Prevention categorize “presumed heterosexual” cases as “no identified risk” (NIR). As such, comparisons of the presumed heterosexual category cannot be made to national data. Caution should be used in interpreting data for presumed heterosexual, as it is still not clear what the exposure risk was for females in this category. Although a person may not report other risk behaviors, such as injection drug use to a health care provider, it does not exclude the possibility that an individual has experienced these other risks. There are many barriers to disclosing HIV risk behaviors in the health care setting such as a limited patient-provider relationship or stigma.

Table 4. People living with HIV/AIDS on December 31, 2010 by gender and race/ethnicity: Massachusetts¹

Race/Ethnicity:	Male		Female		Total	
	N	%	N	%	N	%
White (non-Hispanic)	6,448	51%	1,362	27%	7,810	44%
Black (non-Hispanic)	2,935	23%	2,206	43%	5,141	29%
Hispanic	2,921	23%	1,420	28%	4,341	25%
Asian/Pacific Islander	192	2%	56	1%	248	1%
Other/Unknown	53	<1%	28	1%	81	<1%
Total	12,549	100%	5,072	100%	17,621	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 5. People diagnosed with HIV infection by gender and race/ethnicity: Massachusetts¹, 2007–2009²

Race/Ethnicity:	Male		Female		State Total	
	N	%	N	%	N	%
White NH	643	48%	100	21%	743	41%
Black NH	354	26%	241	50%	595	33%
Hispanic/Latino	304	23%	129	27%	433	24%
API	36	3%	8	2%	44	2%
Other/Unknown	5	<1%	2	<1%	7	<1%
Total	1,342	100%	480	100%	1,822	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding). Data as of 1/1/11

Explanation of age adjusted rates

A “rate” of a disease per 100,000 population is a useful way to compare groups that have substantially different population sizes rather than relying on the raw number of cases. For example, the number of people living with HIV/AIDS on December 31, 2010 who are Hispanic/Latino, is 4,341 whereas the number of people living with HIV/AIDS who are white (non-Hispanic) is 7,810. Although the *number* of people living with HIV/AIDS who are Hispanic/Latino in Massachusetts is smaller than the number of people living with HIV/AIDS who are white (non-Hispanic), we also need to consider that there are far fewer people of Hispanic/Latino heritage living in Massachusetts than white (non-Hispanic) individuals. Hispanic/Latino individuals represent 8% of the Massachusetts population compared to white (non-Hispanic) individuals who represent 81% of the population¹. If HIV/AIDS had the same impact on the Hispanic/Latino population of the state as on the white (non-Hispanic), then there should be over 10 times as many cases in white (non-Hispanic) individuals, but there are less than twice as many. By calculating a rate which takes into consideration the differences in the population size, it is evident that the number of people living with HIV/AIDS for every 100,000 Hispanic/Latino individuals in Massachusetts is much higher than the rate for every 100,000 white (non-Hispanic) individuals. This is called a “crude rate” and is calculated by dividing the number of people living with HIV/AIDS by the population of interest (the total number of Hispanic/Latino individuals in Massachusetts, for example) and multiplying by 100,000. (See example 1.A below).

¹ The denominators for prevalence calculations are based on year 2005 population estimates from the MDPH Bureau of Health Statistics, Research and Evaluation

Example 1.A: Calculation of crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (149.7 per 100,000)

$$\begin{aligned}\text{Crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals} &= (\text{number of white (non-Hispanic) individuals living with HIV/AIDS} \div \text{population size of white (non-Hispanic) individuals}) \times 100,000 \\ &= (7,810 / 5,215,472) \times 100,000 \\ &= (.0014974675) \times 100,000 \\ &= \mathbf{149.7}\end{aligned}$$

However, sometimes, in addition to the population size being different, the age composition of the populations is different. In Massachusetts, black (non-Hispanic) and Hispanic/Latino populations are generally younger than white (non-Hispanic). The median age of black (non-Hispanic) people (29.7 years) and Hispanic/Latino people (24.5 years) is younger than that of white (non-Hispanic) people (38.8 years). Therefore, it is necessary to “age-adjust” the HIV/AIDS prevalence rate to get a true comparison of the impact of the disease across racial/ethnic groups without an effect from the differences in age composition. Age-adjustment of rates minimizes the distortion created by differences in age composition.

Age-adjusted rates are calculated by weighting the age-specific rates for a given population by the age distribution of a standard population. The weighted age-specific rates are then added to produce the adjusted rate for all ages combined. (See example 1.B below).

Example 1.B: Calculation of age-adjusted HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (136.1 per 100,000)

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
<i>Age group (in years)</i>	<i># of prevalent HIV/AIDS cases</i>	<i>Population (2005)</i>	<i>2000 US standard population weight</i>	<i>Age-adjusted rate ((B÷CxD)×100,000))</i>
<1	0	57,670	0.013818	0.00
1-4	0	230,681	0.055317	0.00
5-14	10	614,485	0.145565	0.24
15-24	124	646,026	0.138646	2.66
25-34	549	636,970	0.135573	11.68
35-44	1927	823,238	0.162613	38.06
45-54	3494	818,844	0.134834	57.53
55-64	1400	601,053	0.087247	20.32
65-74	268	352,672	0.066037	5.02
75-84	37	299,510	0.044842	0.55
85+ years	1	134,323	0.015508	0.01
Total	7,810	5,215,472	1.000000	136.1

To see the effect of age-distribution on prevalence rates see Table 6 below for a comparison of crude and age-adjusted rates by race/ethnicity.

Table 6. Crude and age-adjusted HIV/AIDS prevalence per 100,000 population¹ on December 31, 2010 by race/ethnicity and gender: Massachusetts²

State Total:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic)	149.7	136.1
Black (non-Hispanic)	1,322.6	1,424.3
Hispanic/Latino	857.7	1,089.5
Asian/Pacific Islander	79.5	82.2
American Indian/Alaskan Native	163.0	149.6
Total prevalence	273.7	259.4
Males:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic) males	256.0	229.9
Black (non-Hispanic) males	1,556.6	1,747.2
Hispanic/Latino males	1,155.2	1,560.8
Asian/Pacific Islander males	125.2	130.2
American Indian/Alaskan Native males	193.3	174.5
Total prevalence among males	402.1	378.0
Females:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic) females	50.5	47.4
Black (non-Hispanic) females	1,102.1	1,150.1
Hispanic/Latina females	560.7	670.5
Asian/Pacific Islander females	35.3	36.1
American Indian/Alaskan Native females	133.6	125.2
Total prevalence among females	152.9	147.8
¹ The denominators for prevalence calculations are from the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2005. ² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/11		

Table 7. Crude and age-adjusted rates of diagnosis of HIV infection per 100,000 population¹ by race/ethnicity and gender: Average annual rate 2007–2009², Massachusetts³

State total:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic)	4.7	4.7
Black (non-Hispanic)	51.0	52.1
Hispanic/Latino	28.5	29.5
Asian/Pacific Islander	4.7	4.0
American Indian/Alaskan Native	9.1	8.3
Total rate	9.4	9.2
Males:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic) Males	8.5	8.3
Black (non-Hispanic) Males	62.6	64.8
Hispanic/Latino Males	40.1	42.3
Asian/Pacific Islander Males	7.8	6.8
American Indian/Alaskan Native Males	18.4	16.7
Total rate among males	14.3	13.9
Females:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic) Females	1.2	1.2
Black (non-Hispanic) Females	40.1	40.5
Hispanic/Latina Females	17.0	17.4
Asian/Pacific Islander Females	1.7	1.3
American Indian/Alaskan Native Females	0.0	0.0
Total rate among females	4.8	4.8
¹ The denominators are from the Massachusetts Department of Public Health Modified Age, Race/Ethnicity, & Sex Estimates 2005; all rates are age-adjusted using the 2000 US standard population. ² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. ³ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. Data Source: MDPH HIV/AIDS Surveillance Program; data as of 1/1/11		

Table 8. Crude and age-adjusted rates of death among people reported with HIV/AIDS per 100,000 population¹ by race/ethnicity and gender: average annual rate 2007–2009, Massachusetts²

State Total:	Crude Rate per 100,000	Age-Adjusted Rate per 100,000
White (non-Hispanic)	2.4	2.2
Black (non-Hispanic)	17.0	19.3
Hispanic/Latino	11.1	16.3
Mass. Total Rate	3.9	3.7
Males:	Crude Rate per 100,000	Age-Adjusted Rate per 100,000
White (non-Hispanic) Males	3.8	3.3
Black (non-Hispanic) Males	22.1	26.4
Hispanic/Latino Males	14.8	23.5
Mass. Total Rate Among Males	5.7	5.3
Females:	Crude Rate per 100,000	Age-Adjusted Rate per 100,000
White (non-Hispanic) Females	1.2	1.1
Black (non-Hispanic) Females	12.2	13.3
Hispanic/Latina Females	7.5	10.2
Mass. Total Rate Among Females	2.3	2.1
¹ The denominators for rate calculations are from the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2005; all rates are age-adjusted using the 2000 US standard population. ² Effective, January 1, 2011 the Massachusetts Department of Public Health, Office of HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being diagnosed and reported in Massachusetts. Data Source: MDPH HIV/AIDS Surveillance Program; data as of 1/1/11		

Table 9. People diagnosed with HIV infection by race/ethnicity¹ and exposure mode: Massachusetts², 2007–2009³

	White NH		Black NH		Hispanic/ Latino		API	
Exposure Mode:	N	%	N	%	N	%	N	%
Male-to-male sex (MSM)	475	64%	109	18%	136	31%	22	50%
Injection drug use (IDU)	67	9%	28	5%	73	17%	-- ⁶	-- ⁶
MSM/IDU	44	6%	5	1%	9	2%	0	0%
Heterosexual sex	40	5%	102	17%	70	16%	-- ⁶	-- ⁶
Other	2	<1%	7	1%	1	<1%	0	0%
Total undetermined/other	115	15%	344	58%	144	33%	-- ⁶	43%
• Presumed heterosexual sex ⁴	28	4%	127	21%	38	9%	-- ⁶	-- ⁶
• Undetermined ⁵	87	12%	217	36%	106	24%	-- ⁶	-- ⁶
Total	743	100%	595	100%	433	100%	44	100%

¹ Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

⁴ Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁵ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

⁶ Percentages calculated from a numerator of less than 5 and a denominator of less than 100 are not presented.

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 10. Males diagnosed with HIV infection by race/ethnicity¹ and exposure mode: Massachusetts², 2007–2009³

Exposure Mode:	White NH		Black NH		Hispanic/Latino		API	
	N	%	N	%	N	%	N	%
Male-to-male sex (MSM)	475	74%	109	31%	136	45%	22	61%
Injection drug use (IDU)	34	5%	21	6%	49	16%	-- ⁴	-- ⁴
MSM/IDU	44	7%	5	1%	9	3%	0	0%
Heterosexual sex	11	2%	36	10%	23	8%	0	0%
Other	2	<1%	4	1%	1	<1%	-- ⁴	-- ⁴
Undetermined ⁵	77	12%	179	51%	86	28%	12	33%
Total	643	100%	354	100%	304	100%	36	100%

¹ Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

⁴ Percentages calculated from a numerator of less than 5 and a denominator of less than 100 are not presented.

⁵ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up.

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 11. Females diagnosed with HIV infection by race/ethnicity¹ and exposure mode: Massachusetts², 2007–2009³

Exposure Mode:	White NH		Black NH		Hispanic/Latina	
	N	%	N	%	N	%
Injection drug use	33	33%	7	3%	24	19%
Heterosexual sex	29	29%	66	27%	47	36%
Other	0	0%	3	1%	0	0%
Total undetermined/other	38	38%	165	68%	58	45%
• Presumed heterosexual sex ⁴	28	28%	127	53%	38	29%
• Undetermined ⁵	10	10%	38	16%	20	16%
Total	100	100%	241	100%	129	100%

¹ Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

⁴ Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁵ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up.

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 12. Percentage distribution of people diagnosed with HIV infection by Health Service Region (HSR)¹ and race/ethnicity: Massachusetts², 2007–2009³

	White NH	Black NH	Hispanic/ Latino	API	Other/Und.	Total
Boston HSR	39%	40%	19%	2%	<1%	539
Central HSR	39%	34%	24%	3%	0%	153
Metro West HSR	44%	37%	16%	4%	0%	309
Northeast HSR	32%	29%	34%	4%	<1%	295
Southeast HSR	54%	27%	17%	1%	1%	283
Western HSR	38%	20%	39%	1%	1%	186
Prisons ⁴	32%	27%	38%	2%	2%	56
Mass. Total	41%	33%	24%	2%	<1%	1,822

¹ Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf for configuration of health service regions.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

⁴ HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

NH = Non-Hispanic, API = Asian/Pacific Islander, Other/Und. = Other/Undetermined

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 13. Percentage distribution of people living with HIV/AIDS on December 31, 2010 by Health Service Region (HSR)¹ and race/ethnicity: Massachusetts²

HSR	White NH	Black NH	Hispanic/ Latino	API	Other/Und.	Total
Boston HSR	41%	38%	19%	1%	<1%	5,625
Central HSR	43%	23%	32%	1%	<1%	1,535
Metro West HSR	51%	34%	13%	2%	1%	2,455
Northeast HSR	44%	23%	30%	3%	<1%	2,671
Southeast HSR	63%	21%	15%	1%	<1%	2,412
Western HSR	31%	19%	48%	1%	1%	1,978
Prison ³	30%	30%	39%	<1%	1%	941
Total	44%	29%	25%	1%	<1%	17,621

¹ Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf for configuration of health service regions.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

NH= Non-Hispanic , API = Asian/Pacific Islander, Other/Und. = Other/Undetermined

Data Source: MDPH HIV/AIDS Surveillance Program, data as of 1/1/11

Table 14. Ten cities/towns¹ in Massachusetts² with the highest proportion of black (non-Hispanic) individuals among HIV infection diagnoses (HIV DX): 2007–2009³

Rank	City/Town	Number of HIV DX among black non-Hispanic individuals	Percent of Total HIV DX
1	Brockton	45	77.6%
2	Malden	18	60.0%
3	Waltham	16	57.1%
4	Quincy	11	50.0%
5	Medford	10	45.5%
6	Framingham	13	43.3%
6	Worcester	39	43.3%
7	Boston	207	40.5%
8	Lowell	18	40.0%
9	Cambridge	18	38.3%

¹ Cities with fewer than 20 HIV infection diagnoses from 2007–2009 are excluded. Note: reflects the city/town of a person's residence at the time of report (not necessarily current residence). People diagnosed while at a correctional facility are not included

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); data as of 1/1/11

Table 15. Ten cities/towns¹ in Massachusetts² with the highest proportion of Hispanic/Latino individuals among HIV infection diagnoses (HIV DX): 2007–2009³

Rank	City/Town	Number of HIV DX among Hispanic/Latino individuals	Percent of Total HIV DX
1	Lawrence	43	84.3%
2	Holyoke	18	78.3%
3	Springfield	39	51.3%
4	Everett	11	45.8%
5	Lynn	17	44.7%
6	Framingham	11	36.7%
7	Lowell	13	28.9%
8	New Bedford	11	26.8%
9	Fall River	8	26.7%
10	Somerville	10	26.3%

¹ Cities with fewer than 20 HIV infection diagnoses from 2007–2009 are excluded. Note: reflects the city/town of a person's residence at the time of report (not necessarily current residence). People diagnosed while at a correctional facility are not included.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); data as of 1/1/11

Table 16. People diagnosed with HIV infection by race/ethnicity¹ and place of birth: Massachusetts², 2007–2009³

Race/Ethnicity:	US		Puerto Rico/ US Dependency ⁴		Non-US		Total
	N	%	N	%	N	%	N
White NH	685	92%	1	<1%	57	8%	743
Black NH	274	46%	2	<1%	319	54%	595
Hispanic/Latino	139	32%	148	34%	146	34%	433
API	11	25%	0	0%	33	75%	44

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

⁴ Ninety-nine percent of people diagnosed with HIV infection from 2007–2009 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands and <1% were born in Guam.

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 17. Males diagnosed with HIV infection by race/ethnicity¹ and place of birth: Massachusetts², 2007–2009³

Race/Ethnicity:	US		Puerto Rico/US Dependency ⁴		Non-US		Total
	N	%	N	%	N	%	N
White NH	594	92%	1	<1%	48	7%	643
Black NH	202	57%	2	1%	150	42%	354
Hispanic/Latino	100	33%	96	32%	108	36%	304
API	8	22%	0	0%	28	78%	36
All Males⁵	909	68%	99	7%	334	25%	1,342

¹ Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

⁴ Ninety-nine percent of people diagnosed with HIV infection from 2007–2009 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands and <1% were born in Guam.

⁵ Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity.

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 18. Females diagnosed with HIV infection by race/ethnicity¹ and place of birth: Massachusetts², 2007–2009³

Race/Ethnicity:	US		Puerto Rico/US Dependency ⁴		Non-US		Total
	N	%	N	%	N	%	N
White NH	91	91%	0	0%	9	9%	100
Black NH	72	30%	0	0%	169	70%	241
Hispanic/Latina	39	30%	52	40%	38	29%	129
All Females⁵	205	43%	52	11%	223	46%	480

¹ Data for American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity are not presented due to small numbers.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

⁴ Ninety-nine percent of people diagnosed with HIV infection from 2007–2009 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands and <1% were born in Guam.

⁵ Totals include people of American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity.

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 19. Black (non-Hispanic) individuals diagnosed with HIV infection born outside the US by leading countries of birth: Massachusetts¹, 2007–2009²

Rank	Country of Birth	Number of HIV DX ³ among Non-US born	Percent of HIV DX among all Non-US born Black (non-Hispanic) individuals
1	Haiti	104	32.6%
2	Uganda	39	12.2%
3	Cape Verde	33	10.3%
4	Kenya	21	6.6%
5	Ghana	20	6.3%
6	Ethiopia	13	4.1%
7	Cameroon	12	3.8%
8	Liberia	11	3.4%
9	Jamaica	9	2.8%
10	Nigeria	8	2.5%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

³ HIV DX = HIV diagnoses

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); data as of 1/1/11

Table 20. Hispanic/Latino individuals diagnosed with HIV infection born outside the US by leading countries of birth: Massachusetts¹, 2007–2009²

Rank	Country of Birth	Number of HIV DX ³ among Non-US born	Percent of HIV DX among all Non-US born Hispanic/Latino individuals
1	Dominican Republic	42	28.8%
2	Brazil	34	23.3%
3	El Salvador	14	9.6%
4	Mexico	12	8.2%
5	Guatemala	11	7.5%
6	Colombia	10	6.8%
7	Honduras	10	6.8%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

³ HIV DX = HIV diagnoses

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); data as of 1/1/11

Table 21. People living with HIV/AIDS on December 31, 2009 by current age and race/ethnicity:¹ Massachusetts²

Age in years	White NH		Black NH		Hispanic/Latino		State Total	
	N	%	N	%	N	%	N	%
Under 13	7	<1%	29	1%	17	<1%	55	<1%
13 to 19	47	1%	73	1%	53	1%	174	1%
20 to 24	80	1%	131	3%	105	2%	326	2%
25 to 29	193	2%	192	4%	186	4%	583	3%
30 to 34	356	5%	313	6%	319	7%	1,018	6%
35 to 39	598	8%	563	11%	519	12%	1,735	10%
40 to 44	1,329	17%	831	16%	877	20%	3,104	18%
45 to 49	1,949	25%	1,023	20%	952	22%	3,980	23%
50 to 54	1,545	20%	947	18%	676	16%	3,209	18%
55 to 59	920	12%	579	11%	347	8%	1,871	11%
60+	786	10%	460	9%	290	7%	1,566	9%
Total	7,810	100%	5,141	100%	4,341	100%	17,621	100%

¹ Data for American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity are not presented due to small numbers

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

NH = non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 22. People diagnosed with HIV infection by age at diagnosis and race/ethnicity:¹ Massachusetts, 2007–2009²

Age in years	White NH		Black NH		Hispanic/Latino		State Total	
	N	%	N	%	N	%	N	%
Under 13	1	<1%	7	1%	1	<1%	9	<1%
13 to 19	7	1%	16	3%	10	2%	35	2%
20 to 24	64	9%	50	8%	42	10%	161	9%
25 to 29	90	12%	61	10%	62	14%	220	12%
30 to 34	75	10%	77	13%	76	18%	238	13%
35 to 39	107	14%	71	12%	65	15%	255	14%
40 to 44	130	17%	83	14%	69	16%	287	16%
45 to 49	138	19%	85	14%	53	12%	281	15%
50 to 54	71	10%	67	11%	28	6%	167	9%
55 to 59	34	5%	36	6%	15	3%	87	5%
60+	26	3%	42	7%	12	3%	82	5%
Total	743	100%	595	100%	433	100%	1,822	100%

¹ Data for American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity are not presented due to small numbers

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

NH = non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 24. People diagnosed with HIV infection under age 25 years within the years 2007–2009¹ and total population under age 25 years by race/ethnicity:² Massachusetts³

	White NH		Black NH		Hispanic/Latino		State Total	
	N	%	N	%	N	%	N	%
HIV Infection Diagnoses	134	24%	233	42%	175	32%	555	100%
Total Population	1,567,072	75%	168,720	8%	234,433	11%	2,088,200	100%

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

² Data for American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity are not presented due to small numbers.

³ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

NH = non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11; year 2005 population estimates are from the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2005

Table 24. Condom use at last sex, BRFSS respondents ages 18–64¹: Massachusetts, 2008–2009		
	% Used Condom	Total N²
Total:	23.4%	5,568
Sex:	% Used Condom	Total N
Male	27.5%	2,308
Female	19.2%	3,260
Race/Ethnicity³:	% Used Condom	Total N
White (non-Hispanic)	20.7%	4,464
Black (non-Hispanic)	44.5%	302
Hispanic/Latino	28.2%	562
Number of Partners:	% Used Condom	Total N
1	19.6%	5,142
2	51.8%	213
3+	64.6%	168
Sex of Partner:	% Used Condom	Total N
Male Respondent Reporting Sex with Male	29.2%	116
Male Respondent Reporting Sex with Female	27.3%	2,177
Female Respondent Reporting Sex with Female	20.4%	88
Female Respondent Reporting Sex with Male	19.3%	3,160
¹ Only asked of adults reporting sex (including oral, vaginal, or anal sex) in the past year		
² Only respondents with known values are included in this table; Column sub-totals may not equal overall total due to missing values		
³ Data for Asian respondents is not presented due to small numbers		
Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2008–2009		